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Kinney, Tony
Tingey, Scott

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Tyr Phe Leu Gly Gly Leu Val Met Leu Trp Ser Pro Asn Val Tyr Val
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 <213> Glycine max

<400> 10

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Leu Val Ser Arg Lys Gly Ser Met Ala Asn Pro Ser Ser Leu Val Asp
          35          40          45

Pro Leu Val Thr Leu Phe Gly Ser Val His Glu Lys Leu Pro Glu Thr
 50          55          60

Gly Ser Thr Leu Phe Pro His Phe Gly Ser Met Phe Ser Val Gly Gly
 65          70          75          80

Asn Gln Pro Arg Asn Glu Asp Trp Asp Glu Glu Ser Leu Ala Arg Glu
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Gly Asp Asp Tyr Val Ser Asp Ala Gly Asp Ser Asp Asp Asn Leu Gln
          100          105          110

Ser Pro Leu Ile Ser Arg Gln Thr Thr Ser Leu Asp Lys Asp Ile Pro
          115          120          125

Pro His Ala His Ser Asn Leu Ala Ser Met Arg Gln Gly Ser Leu Leu
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His Gly Asn Ser Gly Glu Pro Thr Gly Ser Thr Gly Ile Gly Gly Gly
          145          150          155          160

Trp Gln Leu Ala Trp Lys Trp Ser Glu Arg Glu Gly Pro Asp Gly Lys
          165          170          175

Lys Glu Gly Gly Phe Lys Arg Ile Tyr Leu His Gln Asp Gly Gly Ser
          180          185          190

Gly Ser Arg Arg Gly Ser Val Val Ser Leu Pro Gly Gly Asp Leu Pro
          195          200          205

Thr Asp Ser Glu Val Val Gln Ala Ala Ala Leu Val Ser Gln Pro Ala
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Leu Tyr Asn Glu Asp Leu Met Arg Gln Arg Pro Val Gly Pro Ala Met
          225          230          235          240

Ile His Pro Ser Glu Thr Ile Ala Lys Gly Pro Ser Trp Ser Asp Leu
          245          250          255

Phe Glu Pro Gly Val Lys His Ala Leu Ile Val Gly Val Gly Met Gln
          260          265          270

Ile Leu Gln Gln Phe Ser Gly Ile Asn Gly Val Leu Tyr Tyr Thr Pro
          275          280          285

Gln Ile Leu Glu Gln Ala Gly Val Gly Tyr Leu Leu Ser Ser Leu Gly
          290          295          300

Leu Gly Ser Thr Ser Ser Ser Phe Leu Ile Ser Ala Val Thr Thr Leu
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 Gly Arg Arg Thr Leu Leu Leu Ser Thr Ile Pro Val Leu Ile Ala Ala
 340 345 350
 Leu Leu Ile Leu Val Leu Gly Ser Leu Val Asp Leu Gly Ser Thr Ala
 355 360 365
 Asn Ala Ser Ile Ser Thr Ile Ser Val Ile Val Tyr Phe Cys Phe Phe
 370 375 380
 Val Met Gly Phe Gly Pro Ile Pro Asn Ile Leu Cys Ala Glu Ile Phe
 385 390 395 400
 Pro Thr Arg Val Arg Gly Leu Cys Ile Ala Ile Cys Ala Leu Thr Phe
 405 410 415
 Trp Ile Cys Asp Ile Ile Val Thr Tyr Thr Leu Pro Val Met Leu Asn
 420 425 430
 Ser Val Gly Leu Ala Gly Val Phe Gly Ile Tyr Ala Val Val Cys Phe
 435 440 445
 Ile Ala Trp Val Phe Val Phe Leu Lys Val Pro Glu Thr Lys Gly Met
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 ttggtggaga ggaggaaga agatgtcggg tgctgcactg gtcgcgattg cggcttccat 240
 tggcaatctg ctgcaggggt gggacaatgc caccatcgct ggtgctgttc tgtacatcaa 300
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 <212> PRT
 <213> Triticum aestivum

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 20 25 30
 Thr Arg Gly Leu Pro Leu Leu Gly Leu Leu His Leu Ile Ser Leu Val
 35 40 45
 Gly Ser Leu Leu Glu Arg Arg Ser Cys Arg Asp Pro Trp Trp Arg Gly
 50 55 60
 Gly Lys Lys Met Ser Gly Ala Ala Leu Val Ala Ile Ala Ala Ser Ile
 65 70 75 80
 Gly Asn Leu Leu Gln Gly Trp Asp Asn Ala Thr Ile Ala Gly Ala Val
 85 90 95
 Leu Tyr Ile Lys Lys Glu Phe Gln Leu Glu Asn Asn Pro Thr Val Glu
 100 105 110
 Gly Leu Ile Val Ala
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 <212> DNA
 <213> Triticum aestivum

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 ctggtggggg tgatgccacg caagggggca gtgggtttat acatgctgct gctttggtaa 240
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 aagtcatgaa agatttttct cgacaaaaaa aaaaaaaaaa aaaaaaa 1487

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 <211> 345
 <212> PRT
 <213> Triticum aestivum

<400> 14
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 Gly Trp Gln Leu Ala Trp Lys Trp Ser Glu Arg Gln Gly Glu Asp Gly
 20 25 30
 Lys Lys Glu Gly Gly Phe Lys Arg Ile Tyr Leu His Gln Glu Gly Val
 35 40 45
 Ala Asp Ser Arg Arg Gly Ser Val Val Ser Leu Pro Gly Gly Gly Asp
 50 55 60
 Ala Thr Gln Gly Gly Ser Gly Phe Ile His Ala Ala Ala Leu Val Ser
 65 70 75 80
 His Ser Ala Leu Tyr Ser Lys Asp Leu Met Glu Glu Arg Met Ala Ala
 85 90 95
 Gly Pro Ala Met Ile His Pro Leu Glu Ala Ala Pro Lys Gly Ser Ile
 100 105 110
 Trp Lys Asp Leu Phe Glu Pro Gly Val Arg Arg Ala Leu Phe Val Gly
 115 120 125
 Val Gly Ile Gln Met Leu Gln Gln Phe Ala Gly Ile Asn Gly Val Leu
 130 135 140
 Tyr Tyr Thr Pro Gln Ile Leu Glu Gln Ala Gly Val Ala Val Leu Leu
 145 150 155 160
 Ser Asn Leu Gly Leu Ser Ser Ala Ser Ala Ser Ile Leu Ile Ser Ser
 165 170 175
 Leu Thr Thr Leu Leu Met Leu Pro Ser Ile Gly Val Ala Met Arg Leu
 180 185 190
 Met Asp Ile Ser Gly Arg Arg Phe Leu Leu Leu Gly Thr Ile Pro Ile
 195 200 205
 Leu Ile Ala Ser Leu Ile Val Leu Gly Val Val Asn Val Ile Asn Leu
 210 215 220
 Ser Thr Val Pro His Ala Val Leu Ser Thr Val Ser Val Ile Val Tyr
 225 230 235 240
 Phe Cys Cys Phe Val Met Gly Phe Gly Pro Ile Pro Asn Ile Leu Cys
 245 250 255
 Ala Glu Ile Phe Pro Thr Arg Val Arg Gly Val Cys Ile Ala Ile Cys
 260 265 270

Ala Leu Thr Phe Trp Ile Cys Asp Ile Ile Val Thr Tyr Ser Leu Pro
 275 280 285
 Val Met Leu Asn Ala Ile Gly Leu Ala Gly Val Phe Gly Ile Tyr Ala
 290 295 300
 Val Val Cys Cys Ile Ala Phe Val Phe Val Tyr Leu Lys Val Pro Glu
 305 310 315 320
 Thr Lys Gly Met Pro Leu Glu Val Ile Thr Glu Phe Phe Ala Val Gly
 325 330 335
 Ala Lys Gln Ala Gln Ala Thr Ile Ala
 340 345

<210> 15
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 <213> Triticum aestivum

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<210> 16
 <211> 228
 <212> PRT
 <213> Triticum aestivum

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 Ile Leu Glu Gln Ala Gly Val Gly Val Leu Leu Ser Asn Ile Gly Leu
 35 40 45
 Ser Ser Ser Ser Ala Ser Ile Leu Ile Ser Ala Leu Thr Thr Leu Leu
 50 55 60
 Met Leu Pro Ser Ile Gly Ile Ala Met Arg Leu Met Asp Met Ser Gly
 65 70 75 80
 Arg Arg Phe Leu Leu Leu Ser Thr Ile Pro Val Leu Ile Val Ala Leu
 85 90 95
 Ala Val Leu Val Leu Val Asn Val Leu Asp Val Gly Thr Met Val His
 100 105 110

Ala Ala Leu Ser Thr Ile Ser Val Ile Val Tyr Phe Cys Phe Phe Val
115 120 125

Met Gly Phe Gly Pro Ile Pro Asn Ile Leu Cys Ala Glu Ile Phe Pro
130 135 140

Thr Ser Val Arg Gly Ile Cys Ile Ala Ile Cys Ala Leu Thr Phe Trp
145 150 155 160

Ile Gly Asp Ile Ile Val Thr Tyr Thr Leu Pro Val Met Leu Asn Ala
165 170 175

Ile Gly Leu Ala Gly Val Phe Gly Ile Tyr Ala Ile Val Cys Val Leu
180 185 190

Ala Phe Val Phe Val Tyr Met Lys Val Pro Glu Thr Lys Gly Met Pro
195 200 205

Leu Glu Val Ile Thr Glu Phe Phe Ser Val Gly Ala Lys Gln Gly Lys
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Glu Ala Thr Asp
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<213> Zea mays

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aggcaacgtc aagttcgctc tcgctgcnc catcctcgcc tcaatgacct ccattcttct 180
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<210> 18
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 <213> Zea mays

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Cys Xaa Ile Leu Ala Ser Met Thr Ser Ile Leu Leu Gly Tyr Asp Ile
 35 40 45

Gly Val Met Ser Gly Ala Ser Leu Tyr Ile Lys Lys Asp Leu Lys Ile
 50 55 60

Ser Asp Val Lys Leu Glu Ile Leu Met Gly Ile Leu Asn Val Tyr Ser
 65 70 75 80

Leu Ile Gly Ser Xaa Ala Ala Gly Arg Thr Ser Asp Trp Ile Gly Arg
 85 90 95

Arg Xaa Thr Ile Val Phe Ala Ala Val Ile Phe Phe Ala Gly Ala Xaa
 100 105 110

Leu Met Gly Phe Ala Val Asn Tyr Trp Met Leu Met Phe Gly Arg Phe
 115 120 125

Val Ala Gly Ile Gly Val Gly Tyr Ala Leu Met Ile Ala Thr Val Tyr
 130 135 140

Thr Ala Glu Val Ser Pro Xaa Ser Ala Arg Gly Phe Leu Thr Ser Phe
 145 150 155 160

Pro Glu Val Phe Ile Thr Ser
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 <213> Zea mays

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<210> 20
 <211> 513
 <212> PRT
 <213> Zea mays

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 Val Ile Leu Gly Tyr Asp Ile Gly Val Met Ser Gly Ala Ala Met Tyr
 35 40 45
 Ile Lys Lys Asp Leu Asn Ile Thr Asp Val Gln Leu Glu Ile Leu Ile
 50 55 60
 Gly Ile Leu Ser Leu Tyr Ser Leu Phe Gly Ser Phe Ala Gly Ala Arg
 65 70 75 80
 Thr Ser Asp Arg Ile Gly Arg Arg Leu Thr Val Val Phe Ala Ala Val
 85 90 95
 Ile Phe Phe Val Gly Ser Leu Leu Met Gly Phe Ala Val Asn Tyr Gly
 100 105 110

Met Leu Met Ala Gly Arg Phe Val Ala Gly Val Gly Val Gly Tyr Gly
115 120 125
Gly Met Ile Ala Pro Val Tyr Thr Ala Glu Ile Ser Pro Ala Ala Ser
130 135 140
Arg Gly Phe Leu Thr Thr Phe Pro Glu Val Phe Ile Asn Ile Gly Ile
145 150 155 160
Leu Leu Gly Tyr Leu Ser Asn Phe Ala Phe Ala Arg Leu Pro Leu His
165 170 175
Leu Gly Trp Arg Val Met Leu Ala Ile Gly Ala Val Pro Ser Gly Leu
180 185 190
Leu Ala Leu Leu Val Phe Cys Met Pro Glu Ser Pro Arg Trp Leu Val
195 200 205
Leu Lys Gly Arg Leu Ala Asp Ala Arg Ala Val Leu Glu Lys Thr Ser
210 215 220
Ala Thr Pro Glu Glu Ala Ala Glu Arg Leu Ala Asp Ile Lys Ala Ala
225 230 235 240
Ala Gly Ile Pro Lys Gly Leu Asp Gly Asp Val Val Thr Val Pro Gly
245 250 255
Lys Glu Gln Gly Gly Gly Glu Leu Gln Val Trp Lys Lys Leu Ile Leu
260 265 270
Ser Pro Thr Pro Ala Val Arg Arg Ile Leu Leu Ser Ala Val Gly Leu
275 280 285
His Phe Phe Gln Gln Ala Ser Gly Ser Asp Ser Val Val Gln Tyr Ser
290 295 300
Ala Arg Leu Phe Lys Ser Ala Gly Ile Thr Asp Asp Asn Lys Leu Leu
305 310 315 320
Gly Val Thr Cys Ala Val Gly Val Thr Lys Thr Phe Phe Ile Leu Val
325 330 335
Ala Thr Phe Leu Leu Asp Arg Ala Gly Arg Arg Pro Leu Leu Leu Ile
340 345 350
Ser Thr Gly Gly Met Ile Val Ser Leu Ile Cys Leu Gly Ser Gly Leu
355 360 365
Thr Val Ala Gly His His Pro Asp Thr Lys Val Ala Trp Ala Val Ala
370 375 380
Leu Cys Ile Ala Ser Thr Leu Ser Tyr Ile Ala Phe Phe Ser Ile Gly
385 390 395 400
Leu Gly Pro Ile Thr Gly Val Tyr Thr Ser Glu Ile Phe Pro Leu Gln
405 410 415
Val Arg Ala Leu Gly Phe Ala Val Gly Val Ala Ser Asn Arg Val Thr
420 425 430
Ser Ala Val Ile Ser Met Thr Phe Leu Ser Leu Ser Lys Ala Ile Thr
435 440 445
Ile Gly Gly Ser Phe Phe Leu Tyr Ser Gly Ile Ala Ala Val Ala Trp
450 455 460

Val Phe Phe Phe Thr Cys Leu Pro Glu Thr Arg Gly Arg Thr Leu Glu
465 470 475 480

Glu Met Gly Lys Leu Phe Gly Met Pro Asp Thr Gly Met Ala Glu Glu
485 490 495

Ala Glu Asp Ala Ala Ala Lys Glu Lys Val Val Glu Leu Pro Ser Ser
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Lys

<210> 21
<211> 2017
<212> DNA
<213> Oryza sativa

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<210> 22
<211> 510
<212> PRT
<213> Oryza sativa

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<221> UNSURE
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<400> 22
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 35 40 45
 Ile Lys Lys Asp Phe Asn Ile Ser Asp Gly Lys Val Glu Val Leu Met
 50 55 60
 Gly Ile Leu Asn Leu Tyr Ser Leu Ile Gly Ser Phe Ala Ala Gly Arg
 65 70 75 80
 Thr Ser Asp Trp Ile Gly Arg Arg Tyr Thr Ile Val Phe Ala Ala Val
 85 90 95
 Ile Phe Phe Ala Gly Xaa Phe Leu Met Gly Phe Ala Val Asn Tyr Ala
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 Met Leu Met Phe Gly Arg Phe Val Ala Gly Ile Gly Val Gly Tyr Ala
 115 120 125
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 Arg Gly Phe Leu Thr Ser Phe Pro Glu Val Phe Ile Asn Phe Gly Ile
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 Leu Leu Gly Tyr Val Ser Asn Tyr Ala Phe Ser Arg Leu Pro Leu Asn
 165 170 175
 Leu Gly Trp Arg Ile Met Leu Gly Ile Gly Ala Ala Pro Ser Val Leu
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 Leu Ala Leu Met Val Leu Gly Met Pro Glu Ser Pro Arg Trp Leu Val
 195 200 205
 Met Lys Gly Arg Leu Ala Asp Ala Lys Val Val Leu Glu Lys Thr Ser
 210 215 220
 Asp Thr Ala Glu Glu Ala Ala Glu Arg Leu Ala Asp Ile Lys Ala Ala
 225 230 235 240
 Ala Gly Ile Pro Glu Glu Leu Asp Gly Asp Val Val Thr Val Pro Lys
 245 250 255
 Arg Gly Ser Gly Asn Glu Lys Arg Val Trp Lys Glu Leu Ile Leu Ser
 260 265 270
 Pro Thr Pro Ala Met Arg Arg Ile Leu Leu Ser Gly Ile Gly Ile His
 275 280 285
 Phe Phe Gln His Ala Leu Gly Ile His Ser Val Val Phe Tyr Ser Pro
 290 295 300
 Leu Val Phe Lys Ser Pro Gly Leu Thr Asn Asp Lys His Phe Leu Gly
 305 310 315 320
 Thr Thr Trp Pro Phe Gly Val Thr Lys Arg Leu Phe Ile Leu Leu Ala
 325 330 335
 Thr Phe Phe Ile Asp Gly Val Gly Arg Arg Pro Leu Leu Leu Gly Ser
 340 345 350
 Thr Gly Gly Ile Ile Leu Ser Leu Ile Gly Leu Gly Ala Gly Leu Thr
 355 360 365

Val Val Gly Gln His Pro Asp Ala Lys Ile Pro Trp Ala Ile Gly Leu
370 375 380

Ser Ile Ala Ser Thr Leu Ala Tyr Val Ala Phe Phe Ser Ile Gly Leu
385 390 395 400

Gly Pro Ile Thr Trp Val Tyr Ser Ser Glu Ile Phe Pro Leu Gln Val
405 410 415

Arg Ala Leu Gly Cys Ser Leu Gly Val Ala Ala Asn Arg Val Thr Ser
420 425 430

Gly Val Ile Ser Met Thr Phe Leu Ser Leu Ser Lys Ala Ile Thr Ile
435 440 445

Gly Gly Ser Phe Phe Leu Tyr Ser Gly Ile Ala Ala Leu Ala Trp Val
450 455 460

Phe Phe Tyr Thr Tyr Leu Pro Glu Thr Arg Gly Arg Thr Leu Glu Glu
465 470 475 480

Met Ser Lys Leu Phe Gly Asp Thr Ala Ala Ala Ser Glu Ser Asp Glu
485 490 495

Pro Ala Lys Glu Lys Lys Lys Val Glu Met Ala Ala Thr Asn
500 505 510

<210> 23
<211> 1853
<212> DNA
<213> Glycine max

<400> 23
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<210> 24
 <211> 523
 <212> PRT
 <213> Glycine max

<400> 24

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Ala Cys Ala Met Leu Ala Ser Met Thr Ser Ile Leu Leu Gly Tyr Asp
          35          40          45

Ile Gly Val Met Ser Gly Ala Ala Ile Tyr Ile Lys Arg Asp Leu Lys
 50          55          60

Val Ser Asp Glu Gln Ile Glu Ile Leu Leu Gly Ile Ile Asn Leu Tyr
 65          70          75          80

Ser Leu Ile Gly Ser Cys Leu Ala Gly Arg Thr Ser Asp Trp Ile Gly
          85          90          95

Pro Arg Tyr Thr Ile Val Phe Ala Gly Thr Ile Phe Phe Val Gly Ala
          100          105          110

Leu Leu Met Gly Phe Ser Pro Asn Tyr Ser Phe Leu Met Phe Gly Arg
          115          120          125

Phe Val Ala Gly Ile Gly Ile Gly Tyr Ala Leu Met Ile Ala Pro Val
          130          135          140

Tyr Thr Ala Glu Val Ser Pro Ala Ser Ser Arg Gly Phe Leu Thr Ser
          145          150          155          160

Phe Pro Glu Val Phe Ile Asn Gly Gly Ile Leu Ile Gly Tyr Ile Ser
          165          170          175

Asn Tyr Ala Phe Ser Lys Leu Thr Leu Lys Val Gly Trp Arg Met Met
          180          185          190

Leu Gly Val Gly Ala Ile Pro Ser Val Leu Leu Thr Val Gly Val Leu
          195          200          205

Ala Met Pro Glu Ser Pro Arg Trp Leu Val Met Arg Gly Arg Leu Gly
          210          215          220

Glu Ala Arg Lys Val Leu Asn Lys Thr Ser Asp Ser Lys Glu Glu Ala
          225          230          235          240

Gln Leu Arg Leu Ala Glu Ile Lys Gln Ala Ala Gly Ile Pro Glu Ser
          245          250          255

Cys Asn Asp Asp Val Val Gln Val Asn Lys Gln Ser Asn Gly Glu Gly
          260          265          270

Val Trp Lys Glu Leu Phe Leu Tyr Pro Thr Pro Ala Ile Arg His Ile
          275          280          285

Val Ile Ala Ala Leu Gly Ile His Phe Phe Gln Gln Ala Ser Gly Val
          290          295          300

Asp Ala Val Val Leu Tyr Ser Pro Arg Ile Phe Glu Lys Ala Gly Ile
          305          310          315          320

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Thr Asn Asp Thr His Lys Leu Leu Ala Thr Val Ala Val Gly Phe Val
325 330 335

Lys Thr Val Phe Ile Leu Ala Ala Thr Phe Thr Leu Asp Arg Val Gly
340 345 350

Arg Arg Pro Leu Leu Leu Ser Ser Val Gly Gly Met Val Leu Ser Leu
355 360 365

Leu Thr Leu Ala Ile Ser Leu Thr Val Ile Asp His Ser Glu Arg Lys
370 375 380

Leu Met Trp Ala Val Gly Ser Ser Ile Ala Met Val Leu Ala Tyr Val
385 390 395 400

Ala Thr Phe Ser Ile Gly Ala Gly Pro Ile Thr Trp Val Tyr Ser Ser
405 410 415

Glu Ile Phe Pro Leu Arg Leu Arg Ala Gln Gly Ala Ala Ala Gly Val
420 425 430

Ala Val Asn Arg Thr Thr Ser Ala Val Val Ser Met Thr Phe Leu Ser
435 440 445

Leu Thr Arg Ala Ile Thr Ile Gly Gly Ala Phe Phe Leu Tyr Cys Gly
450 455 460

Ile Ala Thr Val Gly Trp Ile Phe Phe Tyr Thr Val Leu Pro Glu Thr
465 470 475 480

Arg Gly Lys Thr Leu Glu Asp Met Glu Gly Ser Phe Gly Thr Phe Arg
485 490 495

Ser Lys Ser Asn Ala Ser Lys Ala Val Glu Asn Glu Asn Gly Gln Val
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Ala Gln Val Gln Leu Gly Thr Asn Val Gln Thr
515 520

<210> 25
<211> 2089
<212> DNA
<213> Triticum aestivum

<400> 25
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<210> 26
<211> 539
<212> PRT
<213> Triticum aestivum

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<400> 26
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      20                      25                      30

Ala Ala Val Glu Pro Lys Lys Lys Gly Asn Val Arg Phe Ala Phe Ala
      35                      40                      45

Cys Ala Ile Leu Ala Ser Met Thr Ser Ile Leu Leu Gly Tyr Asp Ile
      50                      55                      60

Gly Val Met Ser Gly Ala Ser Leu Tyr Ile Gln Lys Asp Leu Lys Ile
      65                      70                      75                      80

Asn Asp Thr Gln Leu Glu Val Leu Met Gly Ile Leu Asn Val Tyr Ser
      85                      90                      95

Leu Ile Gly Ser Phe Ala Ala Gly Arg Thr Ser Asp Trp Ile Gly Arg
      100                      105                      110

Arg Phe Thr Ile Val Phe Ala Ala Val Ile Phe Phe Ala Gly Ala Leu
      115                      120                      125

Ile Met Gly Phe Ser Val Asn Tyr Ala Met Leu Met Phe Gly Arg Phe
      130                      135                      140

Val Ala Gly Ile Gly Val Gly Tyr Ala Leu Met Ile Ala Pro Val Asn
      145                      150                      155                      160

Thr Gly Glu Val Ser Pro Ala Ser Ala Arg Gly Val Leu Thr Ser Phe
      165                      170                      175

Pro Glu Val Phe Ile Asn Phe Gly Ile Leu Leu Gly Tyr Val Ser Asn
      180                      185                      190

Phe Ala Phe Ala Arg Leu Ser Leu Arg Leu Gly Trp Arg Ile Met Leu
      195                      200                      205

Gly Ile Gly Ala Val Pro Ser Val Leu Leu Ala Phe Met Val Leu Gly
      210                      215                      220

Met Pro Glu Ser Pro Arg Trp Leu Val Met Lys Gly Arg Leu Ala Asp
      225                      230                      235                      240

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Ala Lys Val Val Leu Ala Lys Thr Ser Asp Thr Pro Glu Glu Ala Ala
245 250 255

Glu Arg Ile Ala Asp Ile Lys Thr Ala Ala Gly Ile Pro Leu Gly Leu
260 265 270

Asp Gly Asp Val Val Pro Val Pro Lys Asn Lys Gly Ser Ser Glu Glu
275 280 285

Lys Arg Val Leu Lys Asp Leu Ile Leu Ser Pro Thr Ile Ala Met Arg
290 295 300

His Ile Leu Ile Ala Gly Ile Gly Ile His Phe Phe Gln Gln Ser Ser
305 310 315 320

Gly Ile Asp Ala Val Val Leu Tyr Ser Pro Leu Val Phe Lys Ser Ala
325 330 335

Gly Ile Thr Gly Asp Ser Arg Leu Arg Gly Thr Thr Val Ala Val Gly
340 345 350

Ala Thr Asn Thr Val Phe Ile Leu Val Ala Thr Phe Leu Leu Asp Arg
355 360 365

Ile Arg Arg Arg Pro Leu Val Leu Thr Ser Thr Gly Gly Met Leu Val
370 375 380

Ser Leu Val Gly Leu Ala Thr Gly Leu Thr Val Ile Ser Arg His Pro
385 390 395 400

Asp Glu Lys Ile Thr Trp Ala Ile Val Leu Cys Ile Phe Cys Ile Met
405 410 415

Ala Tyr Val Ala Phe Phe Ser Ile Gly Leu Gly Pro Ile Thr Trp Val
420 425 430

Tyr Ser Ser Glu Ile Phe Pro Leu His Val Arg Ala Leu Gly Cys Ser
435 440 445

Leu Gly Val Ala Val Asn Arg Leu Thr Ser Gly Val Ile Ser Met Thr
450 455 460

Phe Ile Ser Leu Ser Lys Ala Met Thr Ile Gly Gly Ala Phe Phe Leu
465 470 475 480

Phe Ala Gly Ile Ala Ser Phe Ala Trp Val Phe Phe Phe Ala Tyr Leu
485 490 495

Pro Glu Thr Arg Gly Arg Thr Leu Glu Asp Met Ser Ser Leu Phe Gly
500 505 510

Asn Thr Ala Thr His Lys Gln Gly Ala Ala Glu Ala Asp Asp Asp Ala
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Gly Glu Lys Lys Val Glu Met Ala Ala Thr Asn
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<210> 27
<211> 1872
<212> DNA
<213> Triticum aestivum

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aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1860
aaaaaaaaaa aa 1872

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<210> 28
 <211> 529
 <212> PRT
 <213> Triticum aestivum

<400> 28
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 35 40 45
 Ser Met Ala Thr Ile Val Leu Gly Tyr Asp Val Gly Val Met Ser Gly
 50 55 60
 Ala Ser Leu Tyr Ile Lys Arg Asp Leu Gln Ile Thr Asp Val Gln Leu
 65 70 75 80
 Glu Ile Met Met Gly Ile Leu Ser Val Tyr Ala Leu Ile Gly Ser Phe
 85 90 95
 Leu Gly Ala Arg Thr Ser Asp Trp Val Gly Arg Arg Val Thr Val Val
 100 105 110
 Phe Ala Ala Ala Ile Phe Asn Asn Gly Ser Leu Leu Met Gly Phe Ala
 115 120 125
 Val Asn Tyr Ala Met Leu Met Val Gly Arg Phe Val Thr Gly Ile Gly
 130 135 140
 Val Gly Tyr Ala Ile Met Val Ala Pro Val Tyr Thr Pro Glu Val Ser
 145 150 155 160

Pro Ala Ser Ala Arg Gly Phe Leu Thr Ser Phe Thr Glu Val Phe Ile
165 170 175

Asn Val Gly Ile Leu Leu Gly Tyr Val Ser Asn Tyr Ala Phe Ala Arg
180 185 190

Leu Pro Leu His Leu Ser Trp Arg Val Met Leu Gly Ile Gly Ala Val
195 200 205

Pro Ser Ala Leu Leu Ala Leu Met Val Phe Gly Met Pro Glu Ser Pro
210 215 220

Arg Trp Leu Val Met Lys Gly Arg Leu Ala Asp Ala Arg Ala Val Leu
225 230 235 240

Ala Lys Thr Ser Asp Thr Pro Glu Glu Ala Val Glu Arg Leu Asp Gln
245 250 255

Ile Lys Ala Ala Ala Gly Ile Pro Arg Glu Leu Asp Gly Asp Val Val
260 265 270

Val Met Pro Lys Thr Lys Gly Gly Gln Glu Lys Gln Val Trp Lys Glu
275 280 285

Leu Ile Phe Ser Pro Thr Pro Ala Met Arg Arg Ile Leu Leu Ala Ala
290 295 300

Leu Gly Ile His Phe Phe Gln Gln Ala Thr Gly Ser Asp Ser Val Val
305 310 315 320

Leu Tyr Ser Pro Arg Val Phe Gln Ser Ala Gly Ile Thr Gly Asp Asn
325 330 335

His Leu Leu Gly Ala Thr Cys Ala Met Gly Val Met Lys Thr Leu Phe
340 345 350

Ile Leu Val Ala Thr Phe Gln Leu Asp Arg Val Gly Arg Arg Pro Leu
355 360 365

Leu Leu Thr Ser Thr Ala Gly Met Leu Ala Cys Leu Ile Gly Leu Gly
370 375 380

Thr Gly Leu Thr Val Val Gly Arg His Pro Asp Ala Lys Val Pro Trp
385 390 395 400

Ala Ile Gly Leu Cys Ile Val Ser Ile Leu Ala Tyr Val Ser Phe Phe
405 410 415

Ser Ile Gly Leu Gly Pro Leu Thr Ser Val Tyr Thr Ser Glu Val Phe
420 425 430

Pro Leu Arg Val Arg Ala Leu Gly Phe Ala Leu Gly Thr Ser Cys Asn
435 440 445

Arg Val Thr Ser Ala Ala Val Ser Met Ser Phe Leu Ser Leu Ser Lys
450 455 460

Ala Ile Thr Ile Gly Gly Ser Phe Phe Leu Tyr Ala Gly Ile Ala Ala
465 470 475 480

Ile Gly Trp Ile Phe Phe Phe Thr Phe Ile Pro Glu Thr Arg Gly Leu
485 490 495

Pro Leu Glu Glu Ile Gly Lys Leu Phe Gly Met Thr Asp Thr Ala Val
500 505 510

Glu Ala Gln Asp Thr Ala Thr Lys Asp Lys Ala Lys Val Gly Glu Met
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Asn

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 <212> PRT
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 Lys Lys Glu Phe Asn Leu Glu Ser Asn Pro Ser Val Glu Gly Leu Ile
 35 40 45
 Val Ala Met Ser Leu Ile Gly Ala Thr Leu Ile Thr Thr Cys Ser Gly
 50 55 60
 Gly Val Ala Asp Trp Leu Gly Arg Arg Pro Met Leu Ile Leu Ser Ser
 65 70 75 80
 Ile Leu Tyr Phe Val Gly Ser Leu Val Met Leu Trp Ser Pro Asn Val
 85 90 95
 Tyr Val Leu Leu Leu Gly Arg Leu Leu Asp Gly Phe Gly Val Gly Leu
 100 105 110
 Val Val Thr Leu Val Pro Ile Tyr Ile Ser Glu Thr Ala Pro Pro Glu
 115 120 125
 Ile Arg Gly Leu Leu Asn Thr Leu Pro Gln Phe Thr Gly Ser Gly Gly
 130 135 140
 Met Phe Leu Ser Tyr Cys Met Val Phe Gly Met Ser Leu Met Pro Ser
 145 150 155 160
 Pro Ser Trp Arg Leu Met Leu Gly Val Leu Phe Ile Pro Ser Leu Val
 165 170 175
 Phe Phe Phe Leu Thr Val Phe Phe Leu Pro Glu Ser Pro Arg Trp Leu
 180 185 190
 Val Ser Lys Gly Arg Met Leu Glu Ala Lys Arg Val Leu Gln Arg Leu
 195 200 205
 Arg Gly Arg Glu Asp Val Ser Gly Glu Met Ala Leu Leu Val Glu Gly
 210 215 220
 Leu Gly Ile Gly Gly Glu Thr Thr Ile Glu Glu Tyr Ile Ile Gly Pro
 225 230 235 240
 Ala Asp Glu Val Thr Asp Asp His Asp Ile Ala Val Asp Lys Asp Gln
 245 250 255
 Ile Lys Leu Tyr Gly Ala Glu Glu Gly Leu Ser Trp Val Ala Arg Pro
 260 265 270
 Val Lys Gly Gly Ser Thr Met Ser Val Leu Ser Arg His Gly Ser Thr
 275 280 285

Met	Ser	Arg	Arg	Gln	Gly	Ser	Leu	Ile	Asp	Pro	Leu	Val	Thr	Leu	Phe
290						295					300				
Gly	Ser	Val	His	Glu	Lys	Met	Pro	Asp	Thr	Gly	Ser	Met	Arg	Ser	Ala
305					310					315					320
Leu	Phe	Pro	His	Phe	Gly	Ser	Met	Phe	Ser	Val	Gly	Gly	Asn	Gln	Pro
				325					330					335	
Arg	His	Glu	Asp	Trp	Asp	Glu	Glu	Asn	Leu	Val	Gly	Glu	Gly	Glu	Asp
			340					345					350		
Tyr	Pro	Ser	Asp	His	Gly	Asp	Asp	Ser	Glu	Asp	Asp	Leu	His	Ser	Pro
		355					360					365			
Leu	Ile	Ser	Arg	Gln	Thr	Thr	Ser	Met	Glu	Lys	Asp	Met	Pro	His	Thr
	370					375					380				
Ala	His	Gly	Thr	Leu	Ser	Thr	Phe	Arg	His	Gly	Ser	Gln	Val	Gln	Gly
385					390					395					400
Ala	Gln	Gly	Glu	Gly	Ala	Gly	Ser	Met	Gly	Ile	Gly	Gly	Gly	Trp	Gln
				405					410					415	
Val	Ala	Trp	Lys	Trp	Thr	Glu	Arg	Glu	Asp	Glu	Ser	Gly	Gln	Lys	Glu
			420					425					430		
Glu	Gly	Phe	Pro	Gly	Ser	Arg	Arg	Gly	Ser	Ile	Val	Ser	Leu	Pro	Gly
		435					440					445			
Gly	Asp	Gly	Thr	Gly	Glu	Ala	Asp	Phe	Val	Gln	Ala	Ser	Ala	Leu	Val
	450					455					460				
Ser	Gln	Pro	Ala	Leu	Tyr	Ser	Lys	Asp	Leu	Leu	Lys	Glu	His	Thr	Ile
465					470					475					480
Gly	Pro	Ala	Met	Val	His	Pro	Ser	Glu	Thr	Thr	Lys	Gly	Ser	Ile	Trp
				485					490					495	
His	Asp	Leu	His	Asp	Pro	Gly	Val	Lys	Arg	Ala	Leu	Val	Val	Gly	Val
			500					505					510		
Gly	Leu	Gln	Ile	Leu	Gln	Gln	Phe	Ser	Gly	Ile	Asn	Gly	Val	Leu	Tyr
		515					520					525			
Tyr	Thr	Pro	Gln	Ile	Leu	Glu	Gln	Ala	Gly	Val	Gly	Ile	Leu	Leu	Ser
	530					535					540				
Asn	Met	Gly	Ile	Ser	Ser	Ser	Ser	Ala	Ser	Leu	Leu	Ile	Ser	Ala	Leu
545					550					555					560
Thr	Thr	Phe	Val	Met	Leu	Pro	Ala	Ile	Ala	Val	Ala	Met	Arg	Leu	Met
				565					570					575	
Asp	Leu	Ser	Gly	Arg	Arg	Thr	Leu	Leu	Leu	Thr	Thr	Ile	Pro	Ile	Leu
			580				585						590		
Ile	Ala	Ser	Leu	Leu	Val	Leu	Val	Ile	Ser	Asn	Leu	Val	His	Met	Asn
		595					600					605			
Ser	Ile	Val	His	Ala	Val	Leu	Ser	Thr	Val	Ser	Val	Val	Leu	Tyr	Phe
	610					615					620				
Cys	Phe	Phe	Val	Met	Gly	Phe	Gly	Pro	Ala	Pro	Asn	Ile	Leu	Cys	Ser
625					630					635					640

Glu Ile Phe Pro Thr Arg Val Arg Gly Ile Cys Ile Ala Ile Cys Ala
 645 650 655
 Leu Thr Phe Trp Ile Cys Asp Ile Ile Val Thr Tyr Ser Leu Pro Val
 660 665 670
 Leu Leu Lys Ser Ile Gly Leu Ala Gly Val Phe Gly Met Tyr Ala Ile
 675 680 685
 Val Cys Cys Ile Ser Trp Val Phe Val Phe Ile Lys Val Pro Glu Thr
 690 695 700
 Lys Gly Met Pro Leu Glu Val Ile Thr Glu Phe Phe Ser Val Gly Ala
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 Arg Gln Ala Glu Ala Ala Lys Asn Glu
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<400> 30
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 Ala Ser Lys Val Ile Ala Asp Phe Asp Pro Leu Lys Lys Pro Pro Lys
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 Arg Asn Lys Phe Ala Phe Ala Cys Ala Thr Leu Ala Ser Met Thr Ser
 35 40 45
 Val Leu Leu Gly Tyr Asp Ile Gly Val Met Ser Gly Ala Ile Ile Tyr
 50 55 60
 Leu Lys Glu Asp Trp His Ile Ser Asp Thr Gln Ile Gly Val Leu Val
 65 70 75 80
 Gly Ile Leu Asn Ile Tyr Cys Leu Phe Gly Ser Phe Ala Ala Gly Arg
 85 90 95
 Thr Ser Asp Trp Ile Gly Arg Arg Tyr Thr Ile Val Leu Ala Gly Ala
 100 105 110
 Ile Phe Phe Val Gly Ala Leu Leu Met Gly Phe Ala Thr Asn Tyr Ala
 115 120 125
 Phe Leu Met Val Gly Arg Phe Val Thr Gly Ile Gly Val Gly Tyr Ala
 130 135 140
 Leu Met Ile Ala Pro Val Tyr Thr Ala Glu Val Ser Pro Ala Ser Ser
 145 150 155 160
 Arg Gly Phe Leu Thr Ser Phe Pro Glu Val Phe Ile Asn Ala Gly Ile
 165 170 175
 Leu Leu Gly Tyr Ile Ser Asn Leu Ala Phe Ser Ser Leu Pro Thr His
 180 185 190
 Leu Ser Trp Arg Phe Met Leu Gly Ile Gly Ala Ile Pro Ser Ile Phe
 195 200 205
 Leu Ala Ile Gly Val Leu Ala Met Pro Glu Ser Pro Arg Trp Leu Val
 210 215 220

Met Gln Gly Arg Leu Gly Asp Ala Lys Lys Val Leu Asn Arg Ile Ser
 225 230 235 240
 Asp Ser Pro Glu Glu Ala Gln Leu Arg Leu Ser Glu Ile Lys Gln Thr
 245 250 255
 Ala Gly Ile Pro Ala Glu Cys Asp Glu Asp Ile Tyr Lys Val Glu Lys
 260 265 270
 Thr Lys Ile Lys Ser Gly Asn Ala Val Trp Lys Glu Leu Phe Phe Asn
 275 280 285
 Pro Thr Pro Ala Val Arg Arg Ala Val Ile Ala Gly Ile Gly Ile His
 290 295 300
 Phe Phe Gln Gln Ala Ser Gly Ile Asp Ala Val Val Leu Tyr Ser Pro
 305 310 315 320
 Arg Ile Phe Gln Ser Ala Gly Ile Thr Asn Ala Arg Lys Gln Leu Leu
 325 330 335
 Ala Thr Val Ala Val Gly Val Val Lys Thr Leu Phe Ile Leu Val Ala
 340 345 350
 Thr Phe Gln Leu Asp Lys Tyr Gly Arg Arg Pro Leu Leu Leu Thr Ser
 355 360 365
 Val Gly Gly Met Ile Ile Ala Ile Leu Thr Leu Ala Met Ser Leu Thr
 370 375 380
 Val Ile Asp His Ser His His Lys Ile Thr Trp Ala Ile Ala Leu Cys
 385 390 395 400
 Ile Thr Met Val Cys Ala Val Val Ala Ser Phe Ser Ile Gly Leu Gly
 405 410 415
 Pro Ile Thr Trp Val Tyr Ser Ser Glu Val Phe Pro Leu Arg Leu Arg
 420 425 430
 Ala Gln Gly Thr Ser Met Gly Val Ala Val Asn Arg Val Val Ser Gly
 435 440 445
 Val Ile Ser Ile Phe Phe Leu Pro Leu Ser His Lys Ile Thr Thr Gly
 450 455 460
 Gly Ala Phe Phe Leu Phe Gly Gly Ile Ala Ile Ile Ala Trp Phe Phe
 465 470 475 480
 Phe Leu Thr Phe Leu Pro Glu Thr Arg Gly Arg Thr Leu Glu Asn Met
 485 490 495
 His Glu Leu Phe Glu Asp Phe Arg Trp Arg Glu Ser Phe Pro Gly Asn
 500 505 510
 Lys Ser Asn Asn Asp Glu Asn Ser Thr Arg Lys Gln Ser Asn Gly Asn
 515 520 525
 Asp Lys Ser Gln Val Gln Leu Gly Glu Thr Thr Thr Ser Thr Thr Val
 530 535 540
 Thr Asn Asp Asn His
 545